**Creating Star Charts Assignment**

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**Abstract:**  On your own, you will make 8 different star charts by drawing the appropriate constellations in the sky for a specific direction and time. You will use the star chart application at weatherunderground.com as your main resource. The 8 star charts you create will correspond to the sky in each of the four directions at 2 different times. The star charts you make, if made accurately, will be able to help you navigate the winter constellations.

**Materials:** Pencil, eraser, 8 pieces of graph paper, netbook, straight edge, colored pencils if you wish.

**Directions:**

1. Navigate to [www.weatherunderground.com](http://www.weatherunderground.com)

2. Under the Travel and Activities tab, select “Astronomy”.

3. We will be star gazing around Quakertown, so enter Q-town’s zip code: 18951 and then hit enter or click “show stars”.

4. Currently you are seeing the entire sky, at 9pm from Q-town’s latitude. The star chart is very cluttered, so we need to simplify it: **Uncheck** “Planets”, “Grid”, and “Info”, then click “Redraw Chart”.

5. Next, click “North” to view the sky in the northern direction. Draw this star chart on a piece of graph paper, including the horizon line and visible constellations. \*Some constellations will be cut off on the sides, draw whatever part is visible – the other half or so will show up in east or west star chart. Make sure to label the constellation names, the direction and time!

6. Change the view to “East” and draw that star chart on another piece of graph paper (do not change the time). Follow the same procedure as in step 5. Then, do the same for the “South” and “West” skies.

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7. You should now have 4 very nice star charts, depicting the sky at 9pm in each direction for the current date. Next, change the time **6 hours into the future** (you will need to forward the day also). Follow the same procedure as above, drawing the star charts for all four directions at this new time/day. Remember to label direction and time on each star chart!

8. Compare the star charts you made for the **Northern sky**, and notice any differences. Indicate on both charts with a curved arrow the directions the stars appear move throughout the night. Is there a spot on the charts that is in the same location? What occupies this spot? (Label it on both charts)

9. Add some artistic flavor if you wish – I am always looking for exemplary student work for my room!!